

# Service Manual

Communication Camera

Model No. **TY-CC10W**



## **⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

## **IMPORTANT SAFETY NOTICE**

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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# 1 Specifications

Power Supply	DC 5 V (Supplied from the television)
Power Consumption	Max. 1.4 W
Dimensions (W × H × D)	8.27" (210 mm) × 3" (76 mm) × 1.7" (43 mm)
Weight (Mass)	Approx. 200 g (Approx. 0.44 lbs.) (Including USB cable)
Operating temperature Range	32 °F- 104 °F (0 °C - 40 °C)
Lens	F/2.0 3P Lens; FOV (D) 56.8 degree(in HD mode)
Microphone	4 unidirectional microphones
Sensor	1/4 inch CMOS sensor
Resolution	1,280 × 720
Output Image	HD, WVGA, VGA, CIF
Output Format	H.264, YUV
Max. Frame Rate	22 fps at HD, 30 fps at VGA
Interface	USB 2.0 High Speed
Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.	

## 2 Troubleshooting Guide

### 2.1. How to diagnose the VIERA Communication Camera

You can carry out functional checks and diagnosis of the images (H.264) of the VIERA Communication camera (TY-CC10W) on a PC by using exclusive diagnosis software.

### 2.2. Preparation for diagnosis

The following items are necessary for diagnosing the camera.

PC	[interface:USB 2.0] [OS:Windows XP / Vista / 7]
Diagnosis software *	[QTCam (QTCamFullSetup_20100615.exe)]
Camera to be checked	[VIERA Communication Camera (TY-CC10W)]

**[\\*Download the Diagnosis Software and Document from here.](#)**

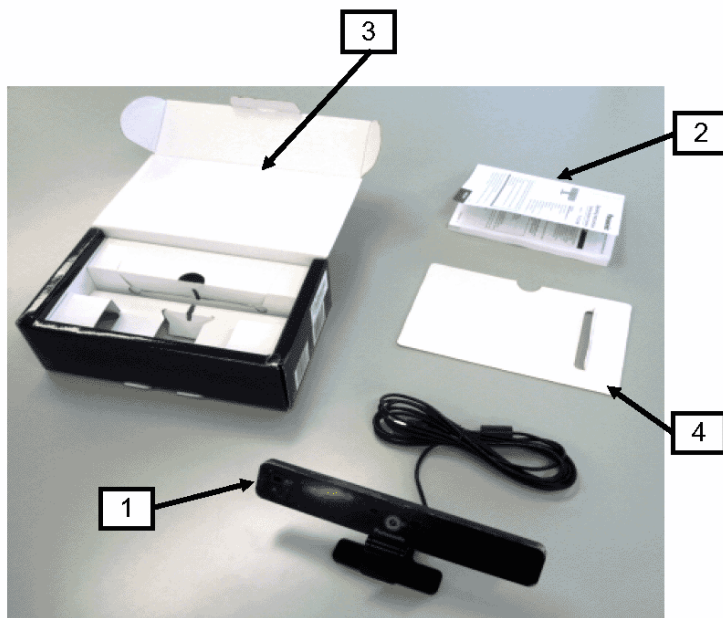
### **3 Exploded View and Replacement Parts List**

Please click the radio button for “Diagrams II / Parts List” on the menu bar.

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**Model No. : TY-CC10W   Exploded View**

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**Model No. : TY-CC10W    Parts List**

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	1	N5ZZ00000193	COMMUNICATION CAMERA UNIT	1	
	2	TQZJ267-2	OPERATION INSTRUCTION	1	
	3	TPCC80101C	CARTON BOX	1	
	4	TPDF2514	PARTITION (WHITE)	1	

# 1 Troubleshooting Guide

## 1.1. How to diagnose the VIERA Communication Camera

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## 1.2. Preparation for diagnosis

The following items are necessary for diagnosing the camera.

PC	[Interface: USB 2.0]
	[OS: Windows XP / Vista / 7]
Diagnosis software *	[QTCam (QTCamFullSetup_20100615.exe)]
Camera to be checked	[VIERA Communication Camera (TY-CC10W)]

## 1.3. Diagnosis software setup and camera inspection

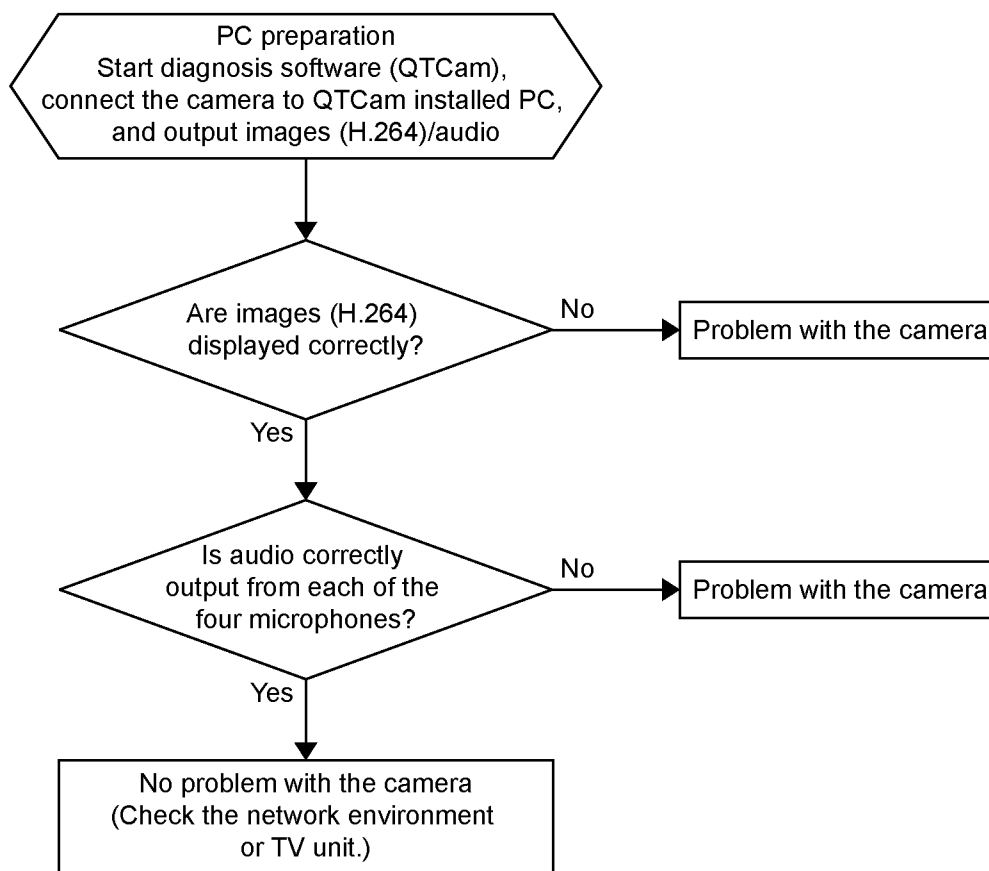
(For details, refer to Chap.2.)

1. Install diagnosis software (QTCam) on the PC.
2. Start the QTCam that you installed.
3. Insert the UBS cable of the camera (TY-CC10W) into the USB port on the PC.
4. Set the image (H.264) output of diagnosis software and check the image output on the camera.  
Check real-time images of the camera.  
(For the setup method, etc., refer to Chap.2.)
5. Set the audio output of the diagnosis software and check the audio output on the camera.  
Check the output by talking into each of the four camera microphones and capturing the audio from each microphone.  
(For the setup method, etc., refer to Chap.2.)

## 1.4. Diagnosis procedures

When experiencing image or audio problems on the VIERA Communication Camera (TY-CC10W), inspect the camera by checking the camera's image and audio output by using diagnosis software and follow the flowchart below for making a diagnosis.

Diagnosis flowchart



## **2 Method of Using the VIERA Communication Camera Testing Software (QTCam)**

### **2.1. VIERA Communication Camera Testing Software (QTCam)**

#### **2.1.1. What is QTCam?**

QTCam is a testing program for VIERA Communication Cameras (TY-CC10W).

Using it allows confirmation of video (H.264) and audio operation of the camera on PCs without the need to connect to a television.

We will explain here the means of installing the program, its settings and testing methods.

#### **2.1.2. Operating Environment**

##### **[Hardware]**

1. VIERA Communication Camera (TY-CC10W)
2. Personal computer (USB 2.0 interface)

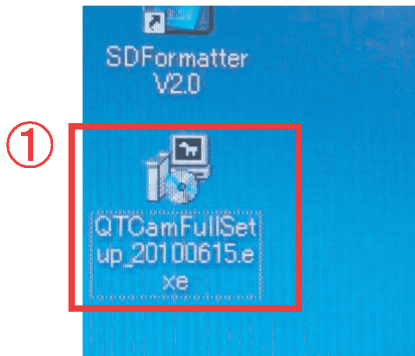
##### **[Software]**

1. Compatible OS: Windows XP / Vista / Windows 7
2. Installation software: QTCamFullSetup\_20100615.exe



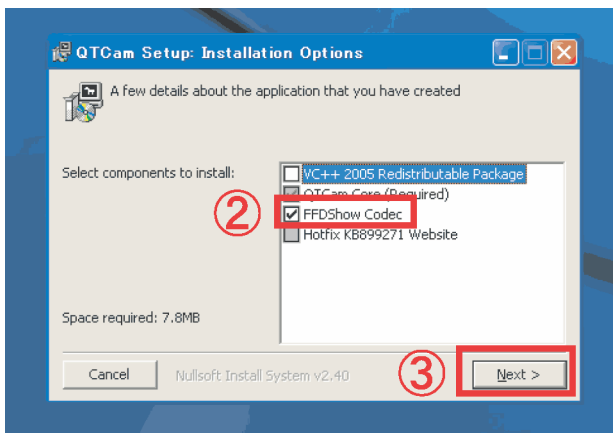
## 2.2. VIERA Communication Camera Testing Software (QTCam) Installation Procedure

### 2.2.1. Installation Procedure



- (1) Copy the downloaded installation software [QTCamFullSetup\_20100615.exe] to the personal computer where you will do the testing and run it.

(double-click on [QTCamFullSetup\_20100615.exe])

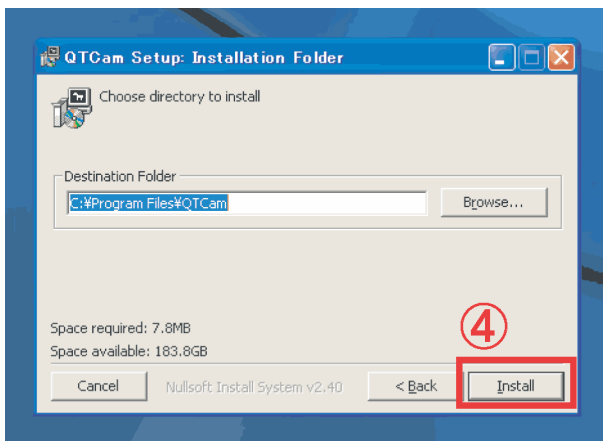


- (2) Activate QTCam Setup: Installation Options and select the software you wish to install.

Select [FFDShow Codec].

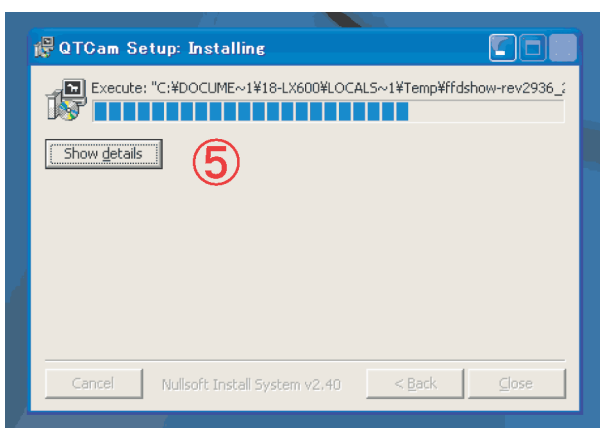
(FFDShow is required to play H.264 videos)

- (3) Click [Next].



- (4) Specify the folder to install the program in and click [Install].  
(You do not have to change the folder)

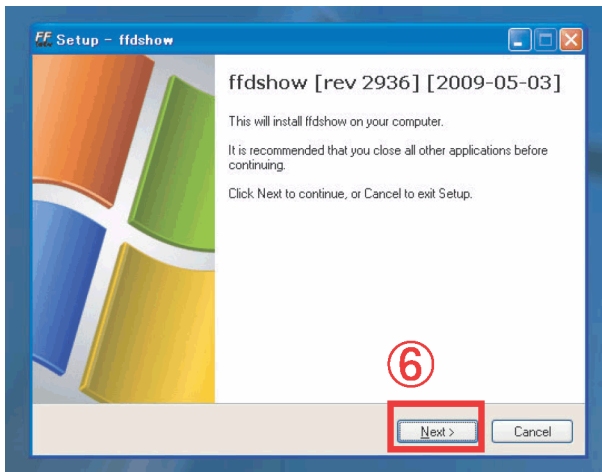
Installation will begin.



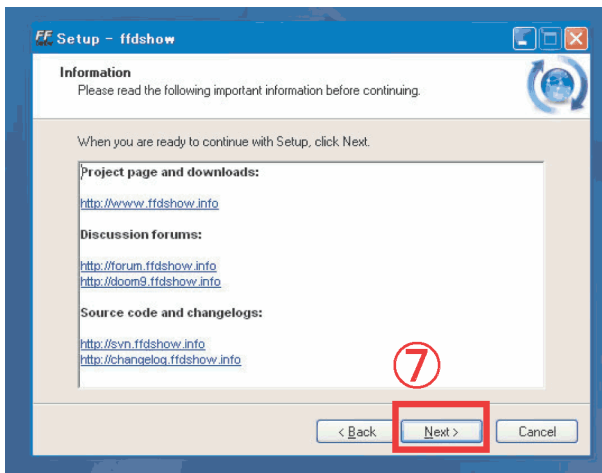
- (5) Installation begins.

Installation of FFDShow occurs next.

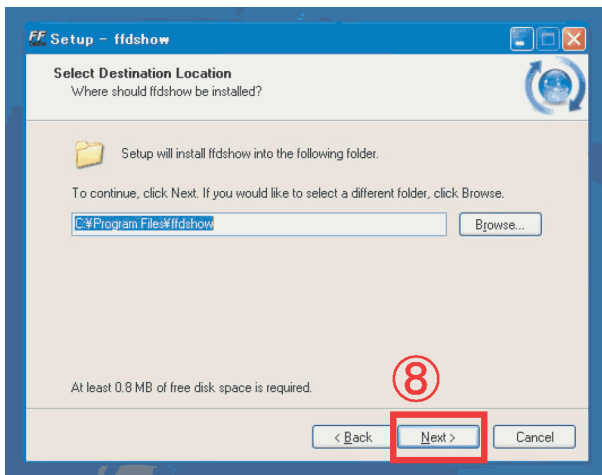
(6) Click [Next] in the [Setup-ffdshow] window that is displayed.

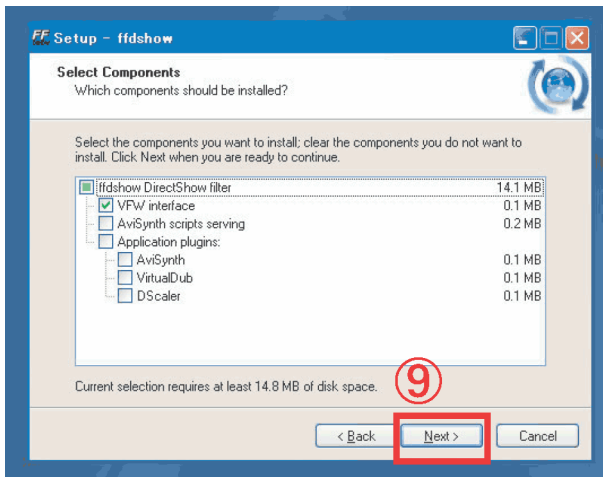


(7) Click [Next] after the ffdshow [Information] window is displayed.



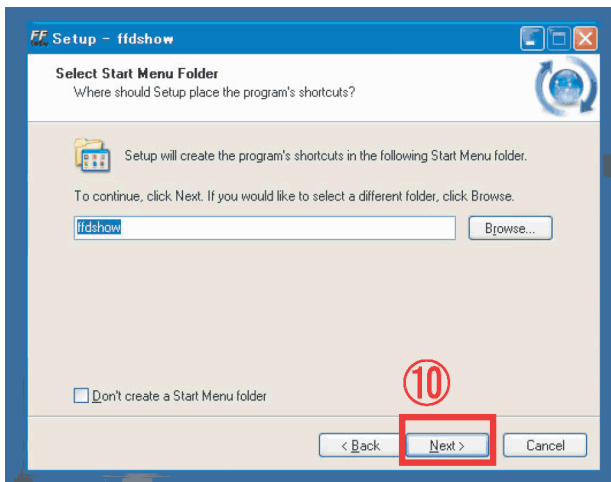
(8) Specify the folder to install the program in and click [Next].  
(You do not have to change the folder)





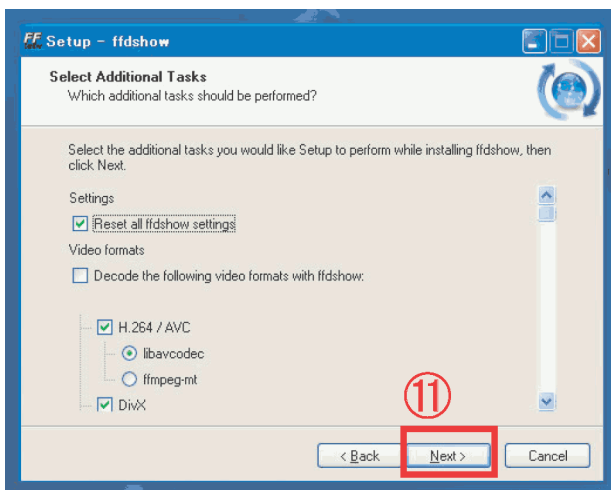
(9) There is no need to change any check marks in this window [Select Components].

Simply click [Next].



(10) Specify the start menu folder.  
(You do not have to change the folder)

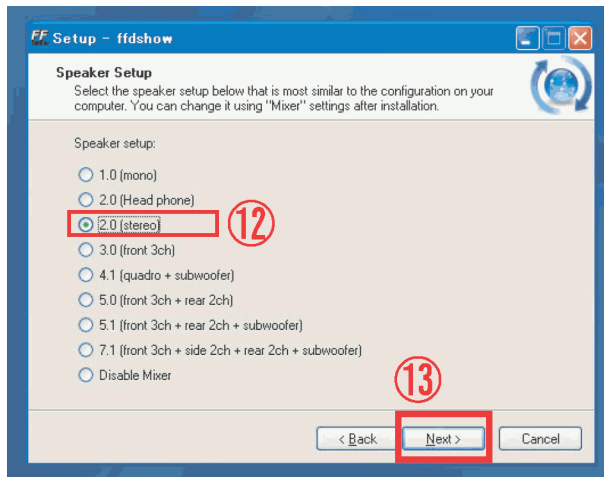
Click [Next].



(11) The [Additional Task] selection window is displayed.

There is no need to change any check marks.

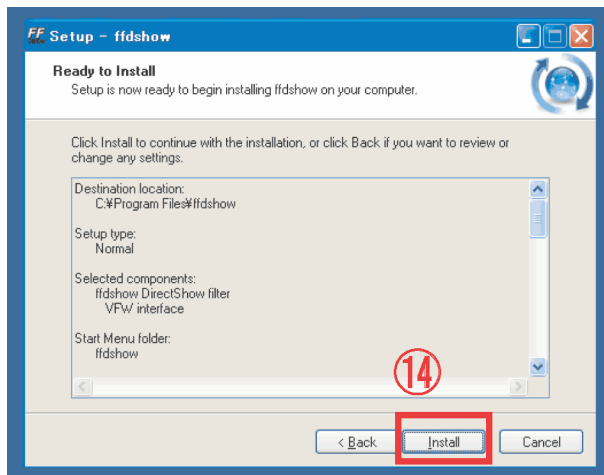
Simply click [Next].



(12) The [Speaker Setup] selection window is displayed.

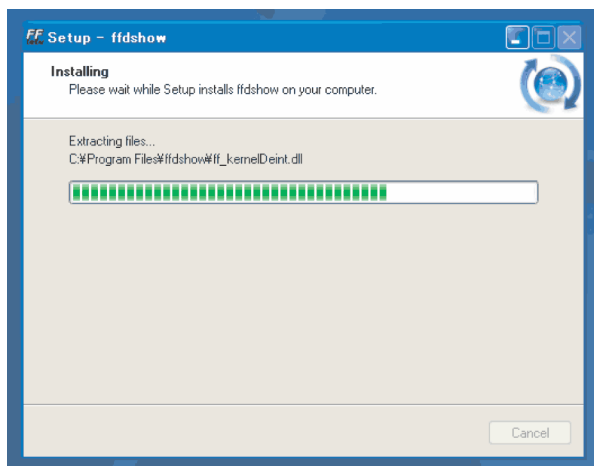
Select [2.0 (stereo)].

(13) Click [Next].

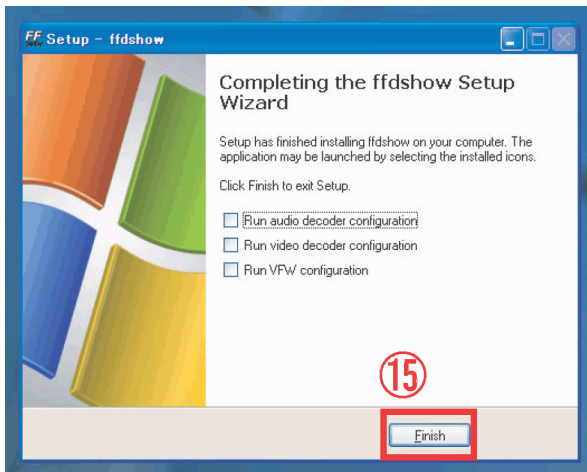


(14) Click [Install].

Installation will begin.

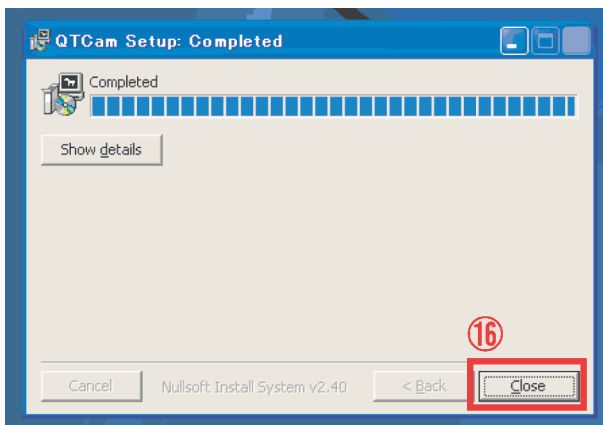


• The installation window



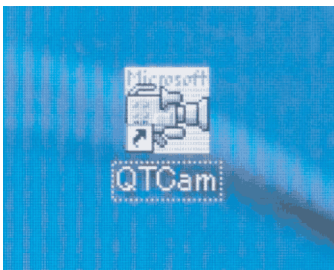
(15) After the installation is completed, the [Completing .....] window is displayed.

There is no need to place any check marks. Simply click [Finish].

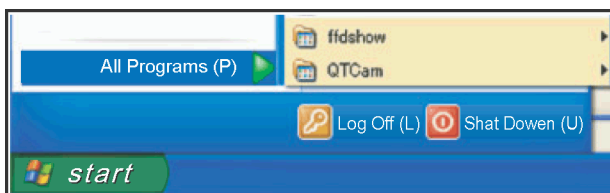


(16) Once [Completed] is displayed the installation is ended.

Click [Close] to close the window.



- A QTCam icon will be created at the desktop of the personal computer.

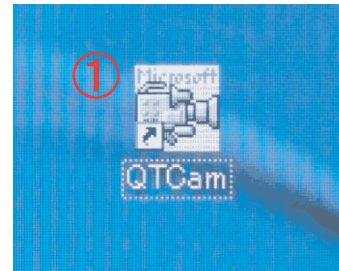


- FFDSHow and QTCam are installed in the computer.

## 2.3. VIERA Communication Camera Testing Software (QTCam) Settings and Testing Procedures

### 2.3.1. Connecting the VIERA Communication Camera

- (1) Activate the QTCam program by double-clicking on the shortcut icon.

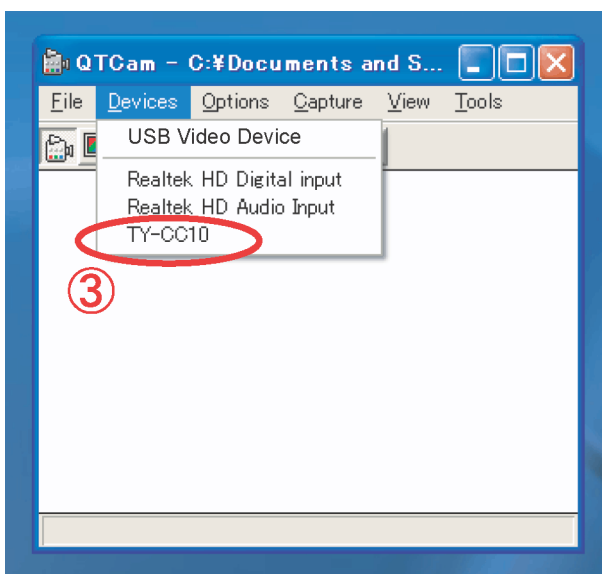


“QTCam” window will open in your personal computer.

- (2) Connect the VIERA Communication Camera (TY-CC10W) you wish to test into your computer's USB slot.



- (3) Click [Devices]. If [TY-CC10] is displayed, the camera has been recognized.



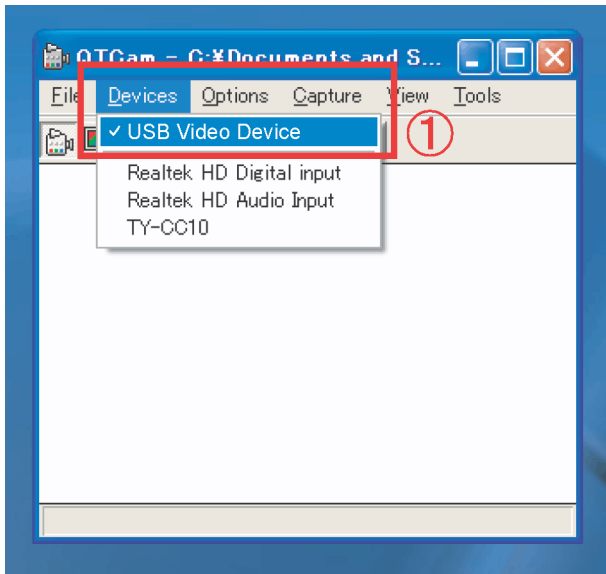
#### If TY-CC10 is not displayed:

- Disconnect and connect the camera into the USB slot and check whether the computer recognizes it.
- If [TY-CC10] does not appear after several attempts at reconnecting the camera, the camera itself may be at fault.

### 2.3.2. Generating VIERA Communication Camera Video and Making Settings

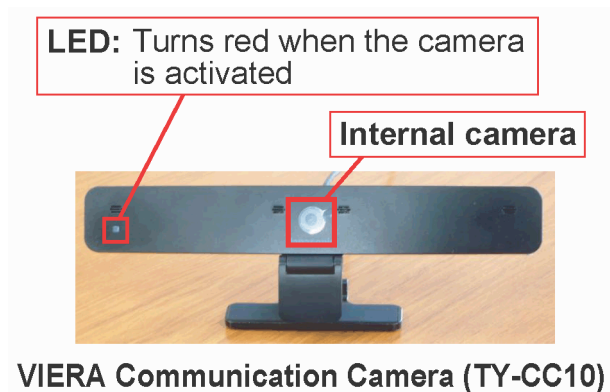
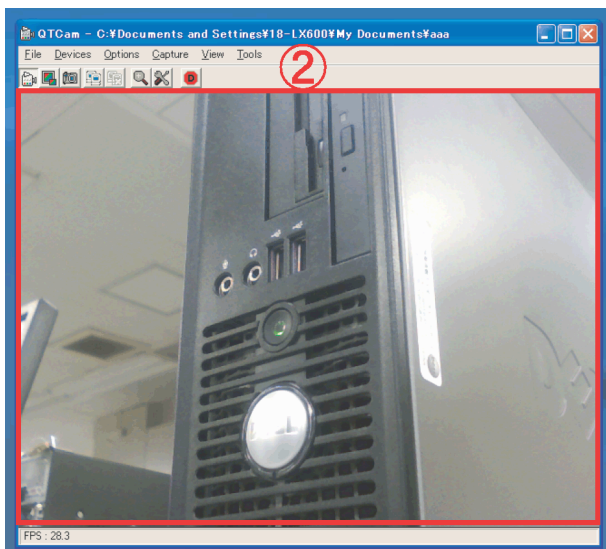
(1) Displaying camera video

Click [Device] and select [USB Video Device].



(2) Video is displayed in the default setting (YUY2, 640 x 480).

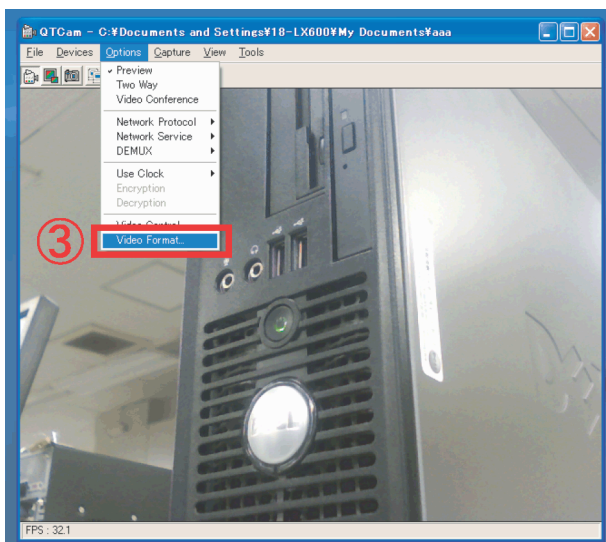
VIERA Communication Camera is performed in H.264, so alter the video format setting as follows.



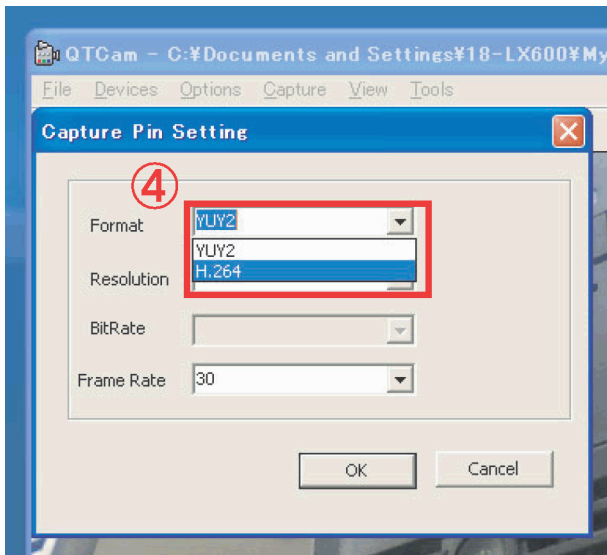
**VIERA Communication Camera (TY-CC10)**

(3) Alter the video format setting to display video in H.264.

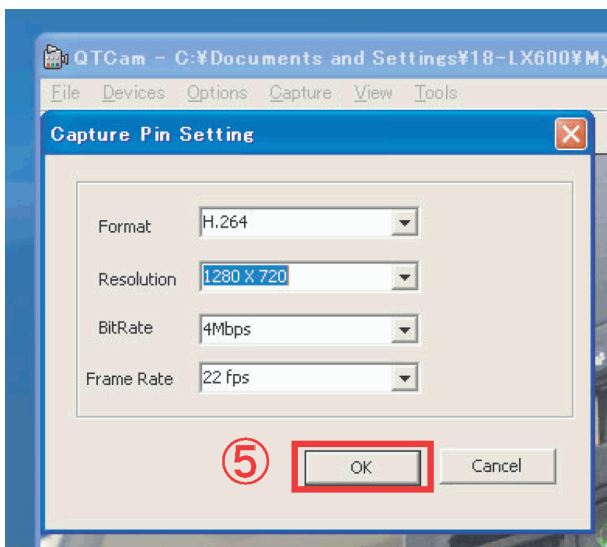
Select [Video format] from [Options].







(4) Alter the format from YUY2 to H.264.



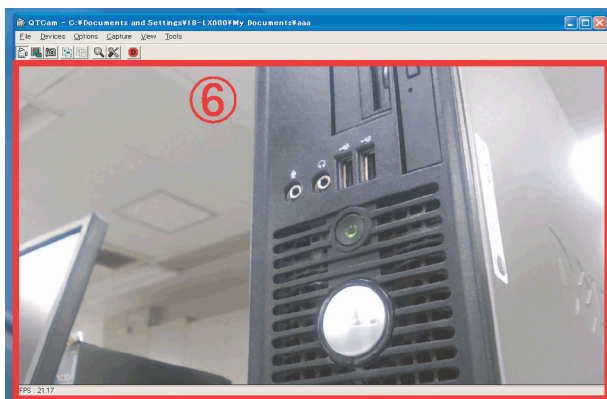
(5) For H.264, ensure the settings are:

Resolution: 1280 x 720

Bit Rate: 4Mbps

Frame Rate: 22 fps

Then click [OK].



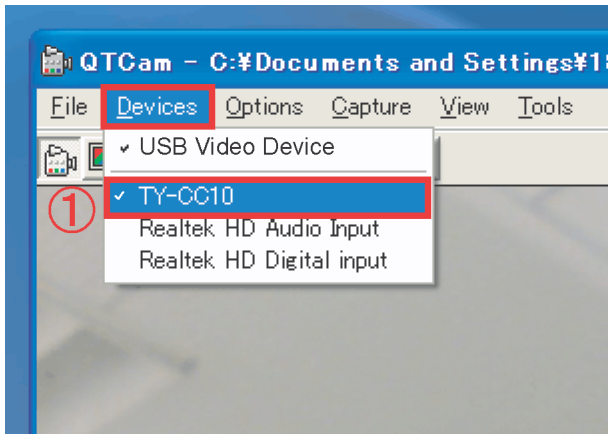
(6) Video is displayed in H.264 (1280 x 720, 22 fps).  
Check that the video is playing successfully.

#### [Key Points Concerning the Video Display]

- Ten to twenty seconds may be required when switching videos in H.264 (depending on the performance of the computer)
- The time required for H.264 encoding can cause a slight time lag with moving pictures.
- Phenomena such as frame skipping may occur according to the processing capacity of the computer.  
Change the resolution and check once again.



### 2.3.3. Generating Audio Output for the VIERA Communication Camera

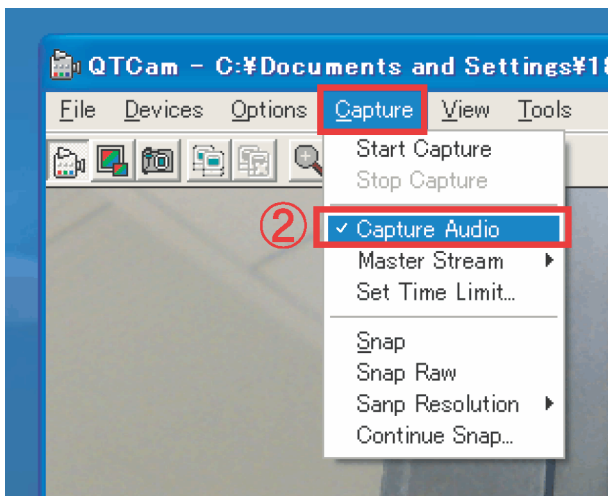


(1) Perform the audio setting.

Select [TY-CC10] from [Device].

#### Check the computer audio device setting

Prior to performing the audio setting, check that the specified device in [Control panel] - [Audio devices] - [Audio] - [Recording] is the [TY-CC10].



(2) Generate audio.

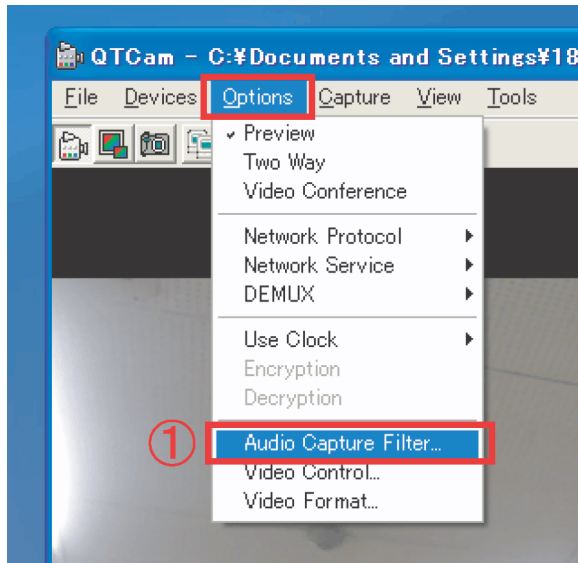
Select [Capture Audio] from [Capture].

Audio from the four microphones of the camera can be output on the computer. Input the audio from each microphone and check audio is generated.

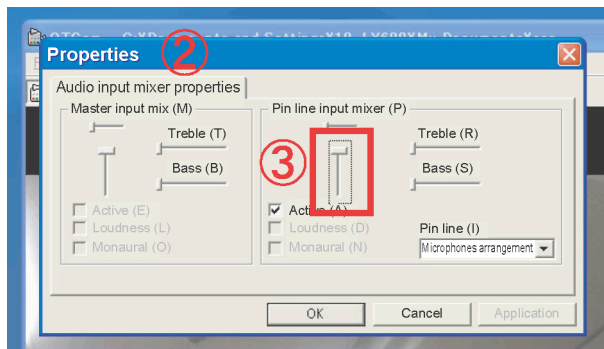


VIERA Communication Camera (TY-CC10)

### 2.3.4. Changing the Volume



(1) Select [Audio Capture Filter] from [Options].



(2) The properties of the audio input mixer are displayed.

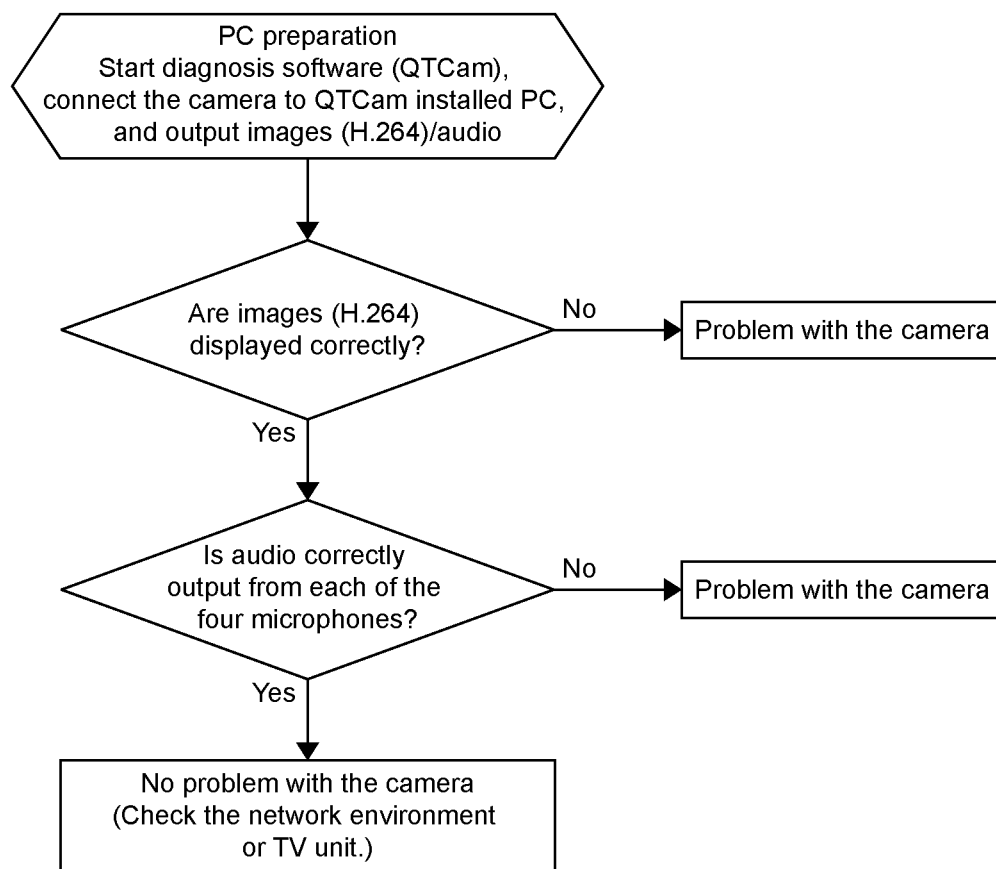
(3) Alter the pin line input mix (P) to adjust to the desired volume.

#### **If no audio can be heard**

Check whether the computer's audio device settings (volume level, muting, etc.) are correct using the Control Panel.

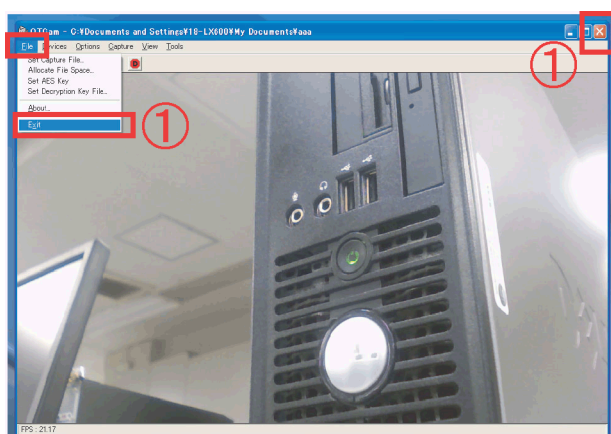
### 2.3.5. Method of Testing the Video (H.264) and Audio of the VIERA Communication Camera

If there are any problems with the video or audio of the VIERA Communication Camera (TY-CC10W)



## 2.4. Closing the VIERA Communication Camera Testing Program (QTCam)

### 2.4.1. Method of Closing QTCam



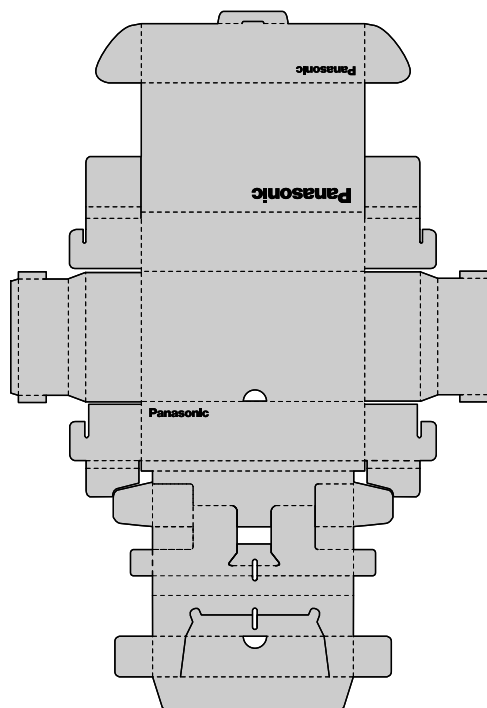
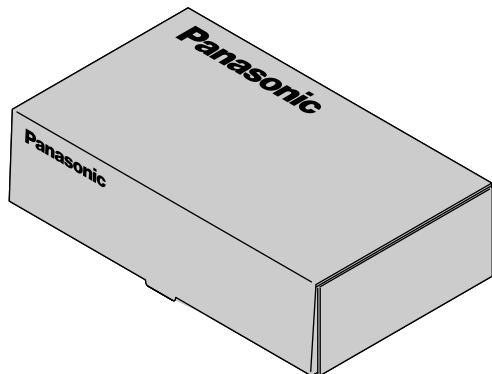
(1) Close the QTCam window.

Select [Exit] from [File], or simply click the highlighted red cross on the window.

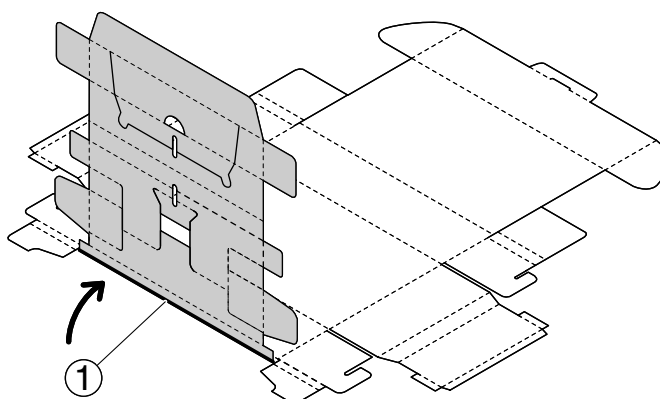
(2) After closing QTCam, disconnect the camera USB cable.

\*When closing QTCam, the set video format will be stored in the memory.  
The H.264 settings will be retained for playback in H.264 when QTCam is activated the next time.

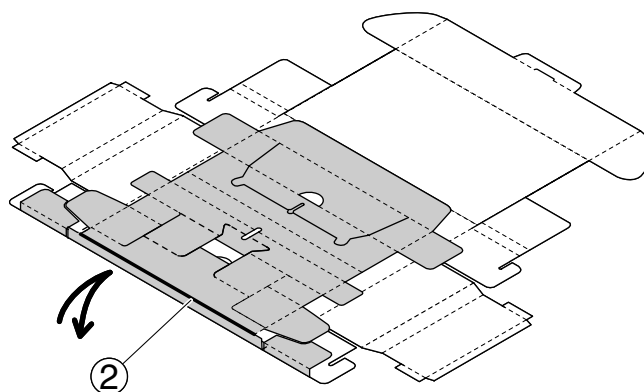
## TY-CC10W How to assemble carton box.



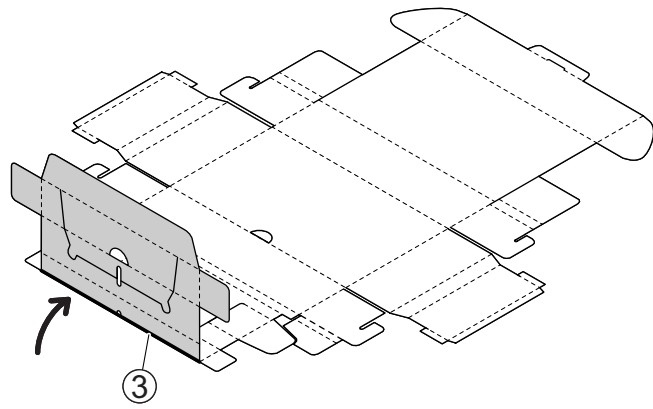
- 01 ~ 13 Make crease before assembling.  
14 ~ 25 Assemble the box.



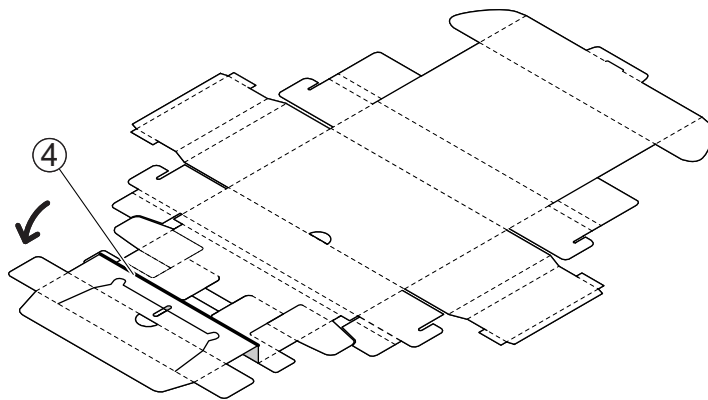
01



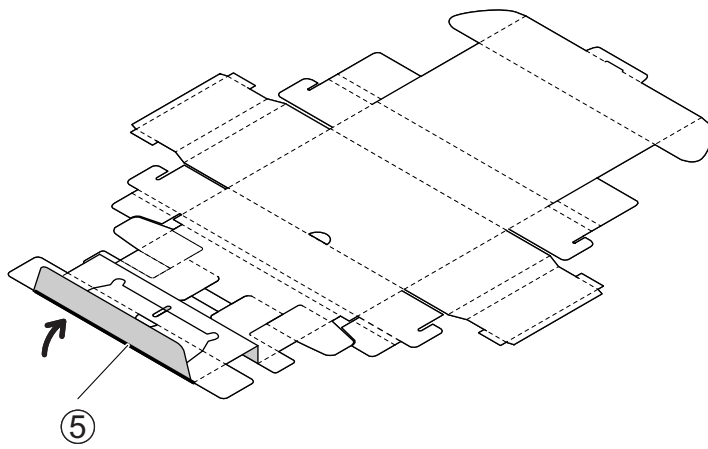
02



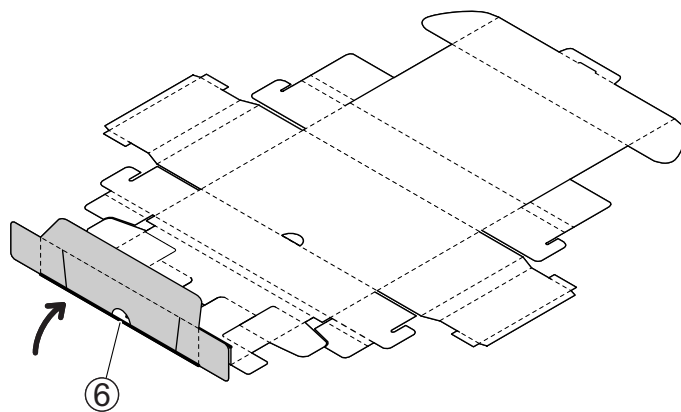
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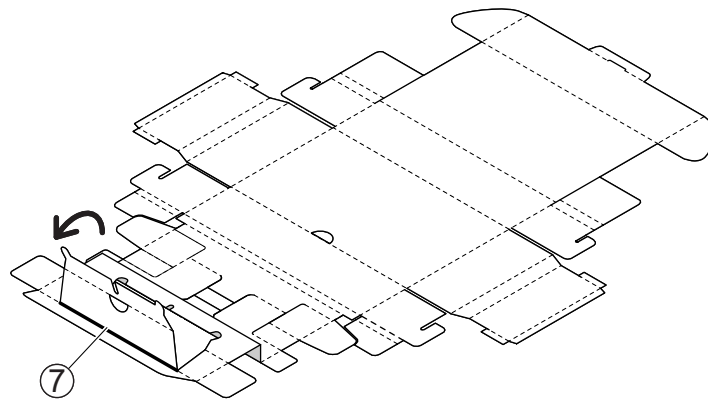
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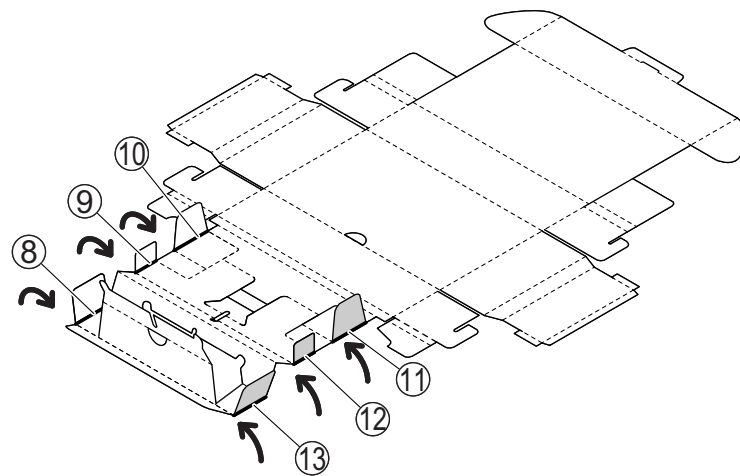
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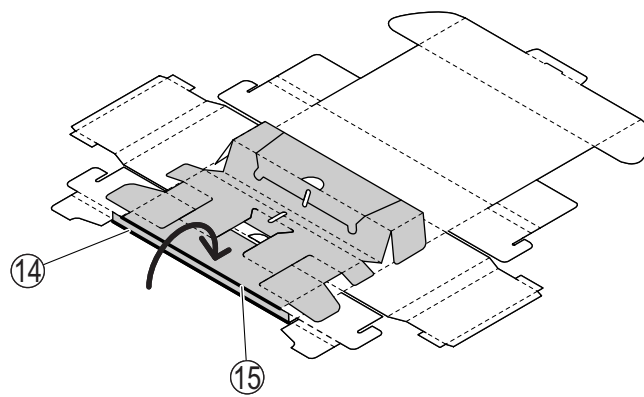
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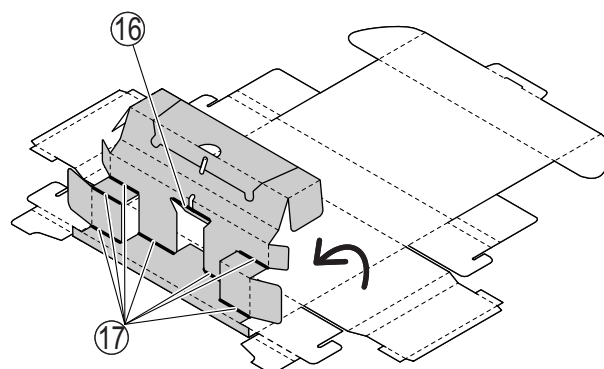
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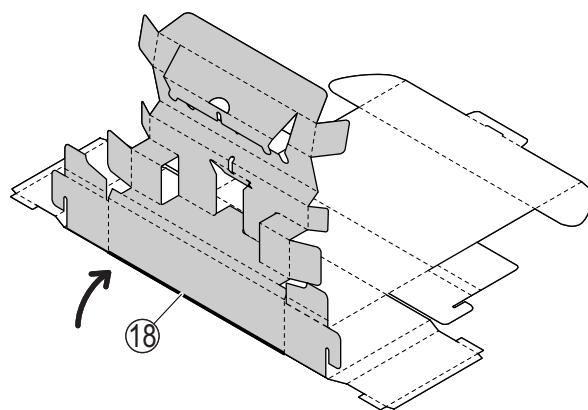
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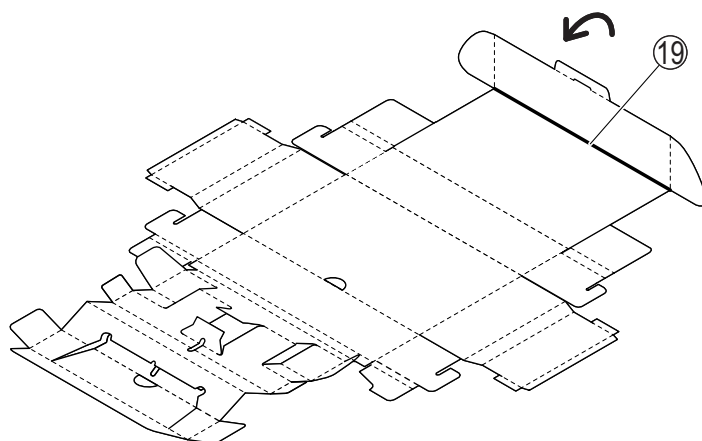
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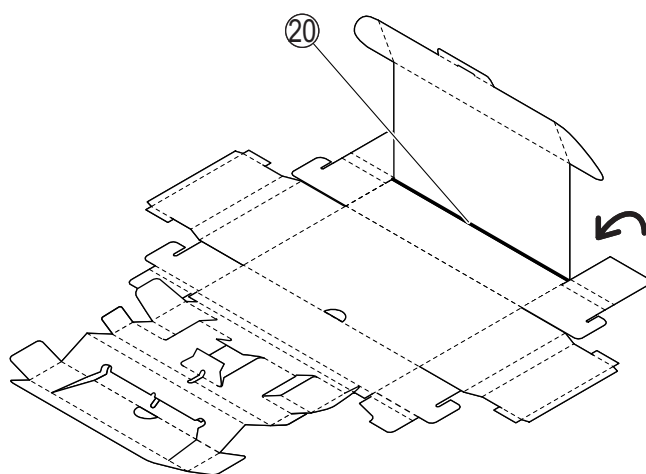
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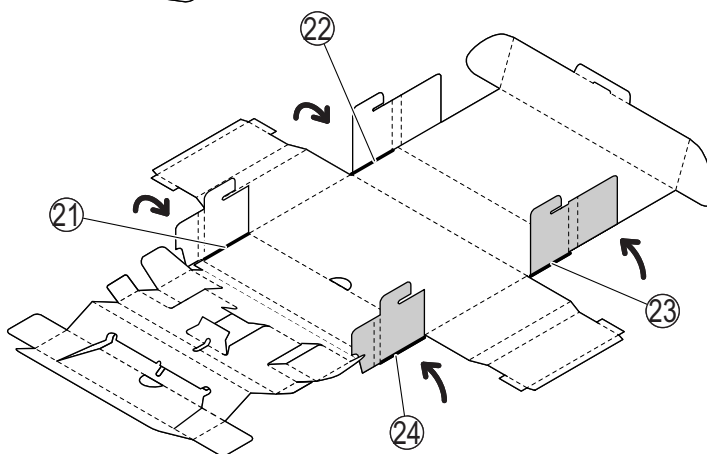
11



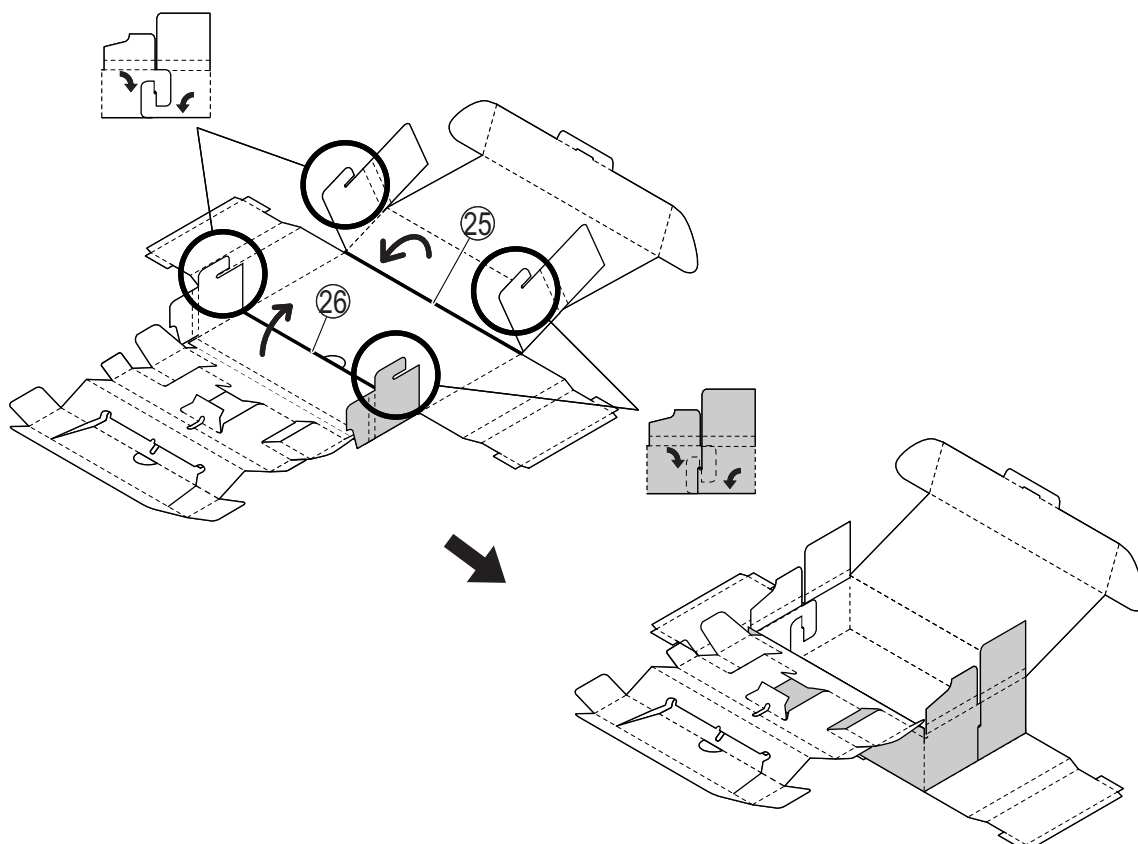
12



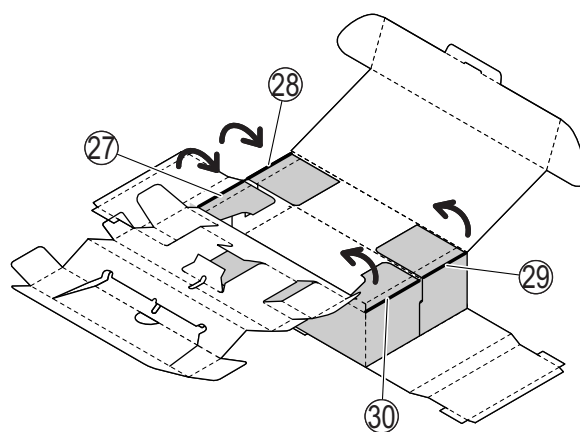
13



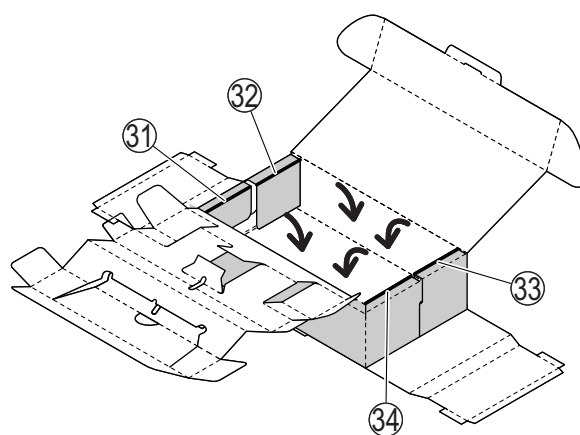
14



15

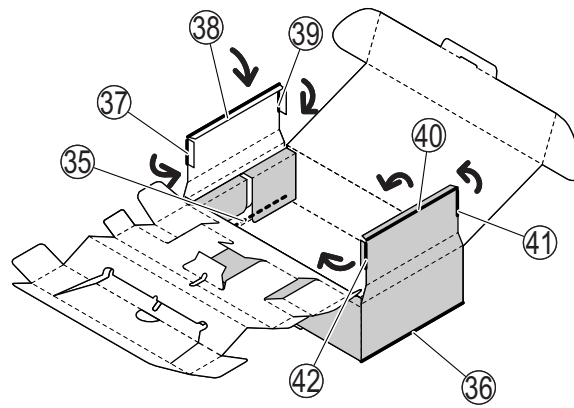


16

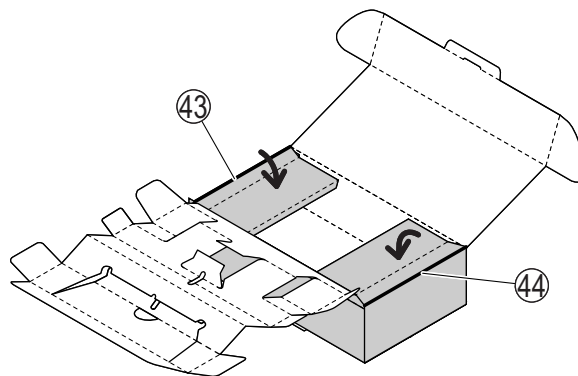


17

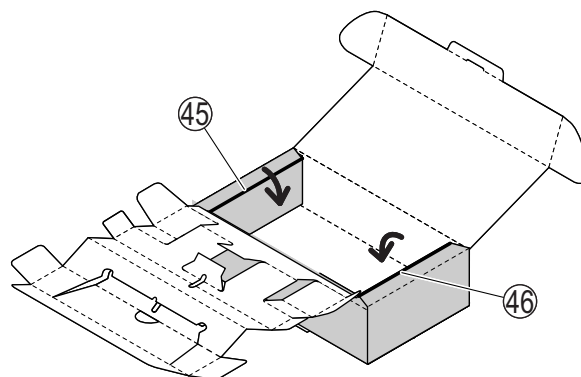




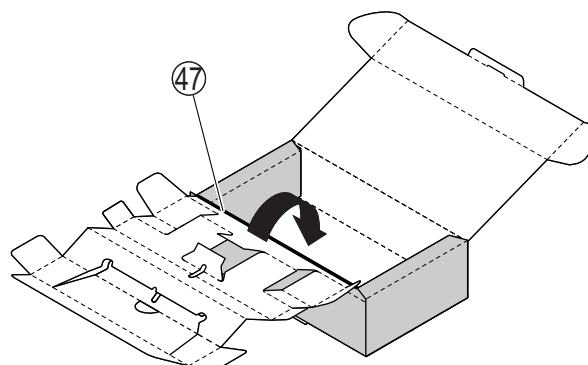
18



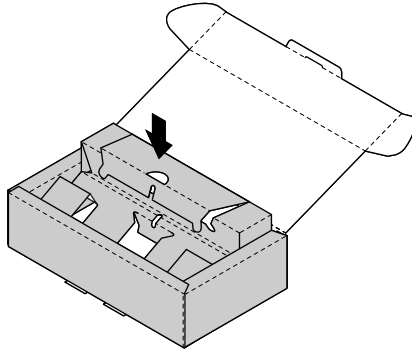
19



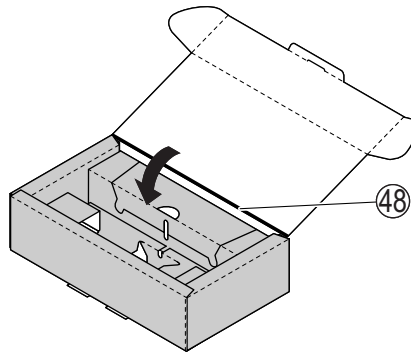
20



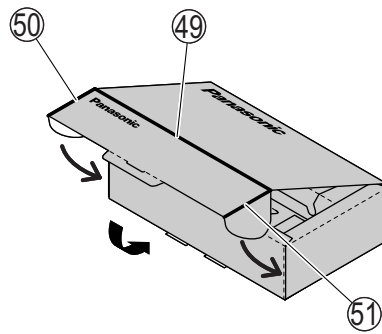
21



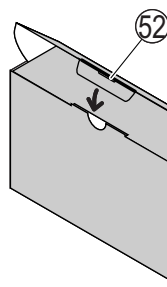
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23



24



25